

ABSTRACT

A radar that can detect target azimuths located outside and adjacent to a scanning angular range of a beam is  
5 provided. For this purpose, the radar determines changes in received signal strength (a signal-strength profile) in the azimuthal direction as a function of a beam azimuth in a predetermined scanning angular range, and estimates the target azimuth causing the signal-strength profile from the  
10 signal-strength profile, which is part of a convex located adjacent to the outermost angle in the scanning angular range. For example, the target azimuth is estimated by a ratio between the received signal strength at the outermost angle of  $10.0^\circ$  and the received signal strength at  $9.5^\circ$ ,  
15 which is one beam inside the outermost position.